

Remarks:

This Amendment and Request for Continued Examination is being submitted in response to the Advisory Action dated May 27, 2003. Claims 1-26, 34, 36-42, 44, 46 and 48 were rejected. Claims 1, 10, 19, 21-25 and 36 are currently amended. Claims 6-9, 11-16, 34, 40-41 and 48 have been cancelled. Claims 1-5, 10, 17-26, 36-39, 42, 44 and 46 are pending. The amended claims are fully supported by the specification.

As previously stated, claims 27-31, 33, 35, 43, 45, 47, and 49-51 have been withdrawn from consideration pursuant to 37 CFR 1.142(b) as being drawn to a non-elected species of spin coating, linear coating head, and spray nozzle, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 5.

Claims 1-11, 16, 18, 21, 22, 25, 32, 34, 36, 46, and 48 stand rejected under 35 USC §102(b) as being anticipated by Schultz et al. (U.S. Patent No. 6,004,617). As the Examiner is well aware, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. @ *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q. 2d 1051, 1053 (Fed. Cir. 1987), *cited in*, M.P.E.P. ' 2131. The identical invention must be shown in as complete detail as is contained in the ... claim. @ *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989). In addition, the elements must be arranged as required by the claim. M.P.E.P. ' 2131, *citing*, *In re Bond*, 15 U.S.P.Q. 2d 1566 (Fed. Cir. 1990). Thus, if any feature taught by the claimed invention is not taught by the reference cited by the Examiner, then the claimed invention and the reference are patentably distinct. In such a case, a 35 USC §102 rejection is improper.

In claim 1, applicant claims that "the combinatorial coating library comprises a predetermined combination of at least one of the plurality of materials and at least one of the plurality of curing environments associated with *each of the plurality of predefined regions*" and "*a thermal gradient curing element*". Therefore, the library contains one

(at a minimum) curing environment for *each* of the plurality (two or more) of regions. Or in other words, in the applicant's invention the curing environments (reaction conditions) of each of the plurality of regions have the same set of reaction (curing) conditions. The limitation assures that the same set of conditions are at least duplicated, and that the reproducibility of results is confirmed. Further, the curing is accomplished using the newly added thermal element curing source. Schultz, on the other hand, states in claim 1 "(e) reacting said components on said first single substrate under a *first set of reaction conditions* and said components on said second single substrate under a *second set of reaction conditions* to form at least two different arrays of at least two different materials." In Schultz, the reaction conditions are clearly different on each substrate (region) and hence are not duplicated. Applicant's method combines duplication with variation to create/use a combinatorial library that is cured using a thermal gradient curing element, while Schultz relies on maximizing variation, with no apparent redundancy. Applicant's claim 1 contains features that are expressly eliminated by Schultz, and hence the two inventions are different. In such a case, a 35 USC §102 rejection is improper, and the rejection should be withdrawn.

Schultz includes the same phrase (e) in the other independent claims 17, 18, 19 and 20. Applicant includes the phrase previously cited "the combinatorial coating library comprises a predetermined combination of at least one of the plurality of materials and at least one of the plurality of curing environments associated with each of the plurality of regions" in independent claims 11, 17, 26, 36, 44 and 48. In such a case, a 35 USC §102 rejection is improper, and the rejections for 17, 26, 36 and 44 and their dependent claims should be withdrawn.

Claims 19, 20, 26 and 44 were rejected under 35 U.S.C. §103(a) as being unpatentable over Schultz as applied to claims 1-11, 16-21, 21-22, 25, 34, 36-41, 46 and 48 above, and further in view of the admitted state of the art.

Claims 12-15, 17-18 and 42 were rejected under 35 U.S.C. §103(a) as being unpatentable over Schultz as applied to claims 1-11, 16-21, 21-22, 25, 34, 36-41, 46 and 48 above, and further in view of Courtney et al. (US 4,390,615).

Generally, to establish *prima facie* obviousness of the claimed invention, all the cited limitations must be taught or suggested by the prior art. *In re Royka* 490 Fed. 2nd 981 (C.C.P.A., 1974). A statement that modifications of the prior art to meet the claimed invention would have been well within the ordinary skill of the art at the time the claimed invention was made because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish *prima facie* case of obviousness without some objective reason to combine the teachings of the references. *M.P.E.P.* '2143.02, citing *Ex Parte Levengood*, 28 U.S.P.Q. 2nd 1300 (Bd. Pat. App., 1993).

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desired validity of the combination. *M.P.E.P.* §2143.01; *In re Mills*, 1916 Fed. 2nd 680, 16 U.S.P.Q. 2nd 1430 (Fed. Cir. 1990).

Claims 1 and 36 have been amended to include “***a thermal gradient curing element***” as a claim element, support in the specification at p.19, ¶60. The thermal gradient element is an elongate element that may have constant dimensions along its longitudinal direction, or length, or, optionally, may have variable dimensions along its longitudinal direction. The placement of the curing source at one end of the heating element provides an exponential, linear, or other decay profile in the temperature of the element as a function of distance from the curing source resulting in a thermal gradient in the longitudinal direction. The heating element is placed adjacent to the substrate, resulting in a variable temperature distribution across the coated substrate, and therefore, variable curing conditions across the coated substrate. Neither Schultz nor Courtney et al. describe an elongate, thermal gradient, curing source. Reconsideration thereof is hereby requested for claims 1-10, 36-39 and 42.


As previously stated, Courtney et al. teaches compositions that employ actinic light to polymerize coatings. Courtney et al. would appear to only tangentially be relevant to the discussion of creating and using combinatorial libraries. Therefore, Applicant respectfully requests that the rejection of claim 17 be withdrawn.

Conclusion:

Applicant would like to thank Examiner for the attention accorded the present Application. In light of the foregoing amendments and remarks, Applicant requests that Examiner reconsider this Application and allow Claims 1-5, 10, 17-26, 36-39, 42, 44 and 46. Should Examiner have any questions, or should any further action be required to place the Application in better condition for allowance, Examiner is encouraged to contact undersigned Counsel at the telephone number, address, or email address provided below.

Respectfully submitted,

Date: 6/17/03


Jeffrey S. Bernard, Esq.
Attorney for Applicant
Reg. No.: 50,020

Dougherty, Clements & Hofer
1901 Roxborough Road, Suite 300
Charlotte, NC 28211 USA
Tel: 704-366-6642
Fax: 704-366-9744
JBernard@worldpatents.com
Licensed in NC and FL